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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,323	02/26/2002	Kazumasa Yashiro	791_187	4109
25191	7590	12/28/2004	EXAMINER	
BURR & BROWN			CREPEAU, JONATHAN	
PO BOX 7068			ART UNIT	PAPER NUMBER
SYRACUSE, NY 13261-7068			1746	

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/083,323

Applicant(s)

YASHIRO ET AL.

Examiner

Jonathan S. Crepeau

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/9/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. This Office action addresses claims 1-41. Although they have been amended, the claims remain rejected for substantially the reasons of record. Accordingly, this action is made final.

### ***Claim Rejections - 35 USC § 102***

2. Claims 1, 3-37, and 39-41 are rejected under 35 U.S.C. 102(b) as being anticipated by Oweis et al (U.S. Patent 5,972,532). The reference is directed to a lithium secondary cell (see col. 3, line 22). The cell comprises a spirally-wound electrode body comprising aluminum positive electrode connections (i.e., foils) and copper negative electrode connections extending axially from the edges of the spiral (see the Figures; col. 3, line 20). The electrode connections are bent substantially orthogonally and are laser-welded to respective current collection tabs (8) (see Fig. 3; col. 2, line 49). The collection tabs are configured in a cross shape and function as cover members (see Fig. 1). Regarding claim 10, columnar crystals would inherently be formed from the electrode connections toward the tabs upon laser welding. Regarding claims 9, 12, 13, 15-31, and 33-37, these claims are not seen to further limit the structure of the claimed battery and thus are accorded little patentable weight. Patentable weight has been accorded to the limitations in claims 12 and 13 that the collectors are welded to the edges of the foils, as this conveys structure to the final product. However, the other process limitations in the above-noted

claims are given little weight, pursuant to MPEP §2113. Regarding claims 39-41, these claims recite intended uses and are also given little weight (although the reference does teach that the batteries are useful in electric vehicles; see col. 3, line 34). See also MPEP §2114.

Thus, the instant claims are anticipated.

### ***Claim Rejections - 35 USC § 103***

3. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oweis et al.

The reference is applied to claims 1, 3-37, and 39-41 for the reasons stated above.

However, the reference does not expressly teach that the capacity of the battery is at least 2 Ah, as recited in claim 38.

However, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated to use a large-capacity battery as the battery of Oweis. As noted above, the reference teaches that the battery is useful in electric vehicles. Since batteries for this particular application typically have a large capacity, this teaching would provide sufficient guidance for the artisan to use such a large capacity battery as the battery of Oweis.

Art Unit: 1746

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oweis et al in view of Watanabe et al (U.S. Patent 6,114,059).

Oweis is applied to claims 1, 3-37, and 39-41 for the reasons stated above. However, the reference does not expressly teach that the battery comprises electrode covers comprising internal terminals, external terminals, and cell covers, as recited in claim 2.

In Figure 2, Watanabe teaches a spirally-wound battery comprising electrode covers, each comprising a cover (5), an internal terminal (7), and an external terminal (6).

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated to use the electrode covers of Watanabe et al. in the battery of Oweis et al. In column 3, line 38, Watanabe teaches the following:

Thus, the present cylinder-shaped secondary battery can radiate the heat generated therein efficiently, and can keep the internal pressure increment minimum. Moreover, even

As such, the artisan would be motivated to use the electrode covers of Watanabe et al. in the battery of Oweis et al in hopes of radiating heat efficiently.

### *Response to Arguments*

5. Applicant's arguments filed October 13, 2004 have been fully considered but they are not persuasive. Applicants state that "the claimed lithium secondary cell having thicker predetermined parts of the collectors prior to joining the collectors to the metallic foils provides a

structurally distinct cell over the cell structure disclosed in Oweis.” However, it is submitted that it is still not clear how the claimed process limitations result in a structurally distinct product over Oweis. As the claim language makes clear, the part of the collector to be joined is thicker *before* being joined. However, this does not necessarily mean that such enlarged thickness must be maintained after joining. In fact, dependent claims 12 and 13 recite that convex part is *melted* during the joining. Applicants further assert that “[c]oncentrating the conduction of heat in the thicker portion of the collector enhances the melting of that portion of that collector (e.g., the thicker predetermined parts) that is joined with the metallic foils, which, in turn, advantageously provides a more secure and reliable joint between the collector and the metallic foils.” However, there does not appear to be any evidentiary support or any indication in the specification that such increased thickness provides a more “secure” or “reliable” joint. As such, this assertion appears to be a mere argument of counsel. Pursuant to MPEP §2145, such arguments cannot take the place of evidence in the record where evidence is necessary. As such, the rejection over the Oweis reference is maintained.

*Conclusion*

6. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr, can be reached at (571) 272-1414. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 1746

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Crepeau  
Primary Examiner  
Art Unit 1746  
December 21, 2004